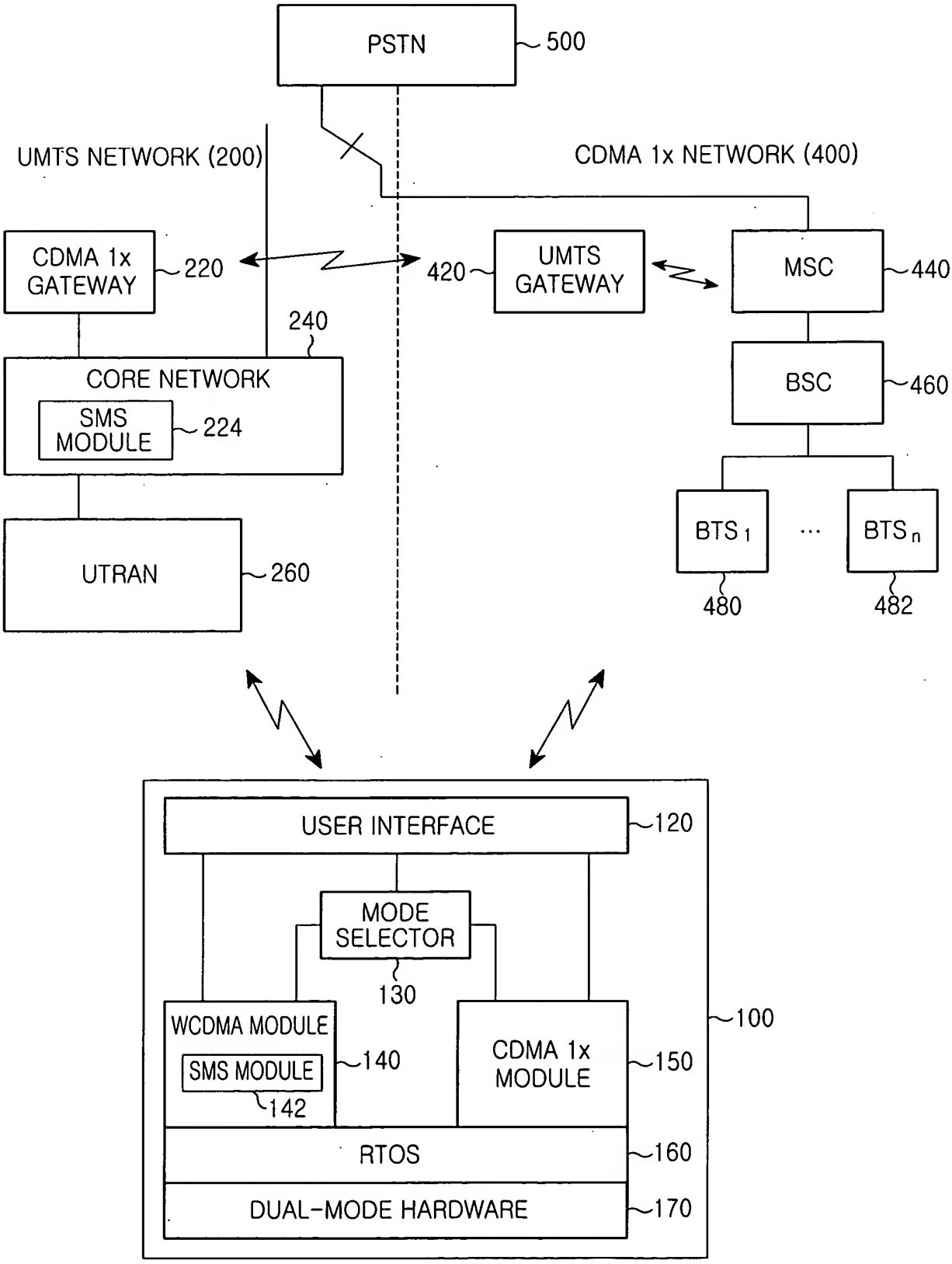

PSTN
500
UMTS NETWORK (200)
CDMA 1x NETWORK (400)
CDMA 1x GATEWAY
220
420
UMTS GATEWAY
MSC
440
240
CORE NETWORK
SMS MODULE
224
BSC
460
BTS 1
...
BTS n
480
482
UTRAN
260
USER INTERFACE
120
MODE SELECTOR
130
WCDMA MODULE
SMS MODULE
142
140
CDMA 1x MODULE
150
100
RTOS
160
DUAL-MODE HARDWARE
170

FIG.1

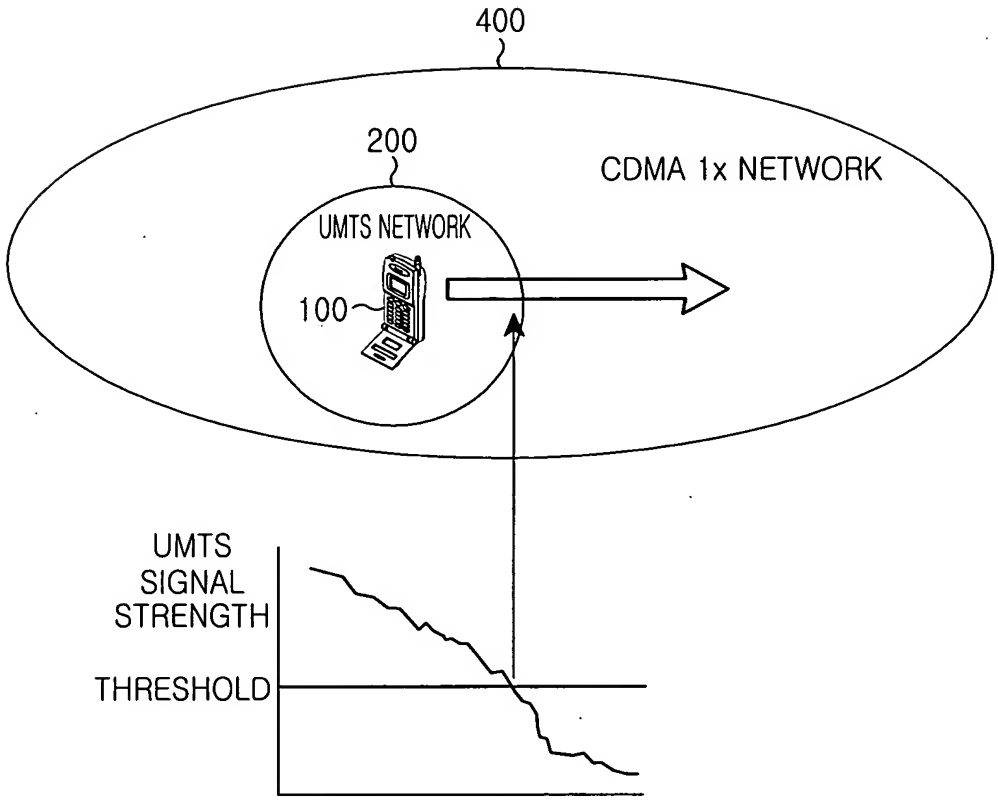

400
200
CDMA 1x NETWORK
UMTS NETWORK
100
UMTS
SIGNAL
STRENGTH
THRESHOLD

FIG.2

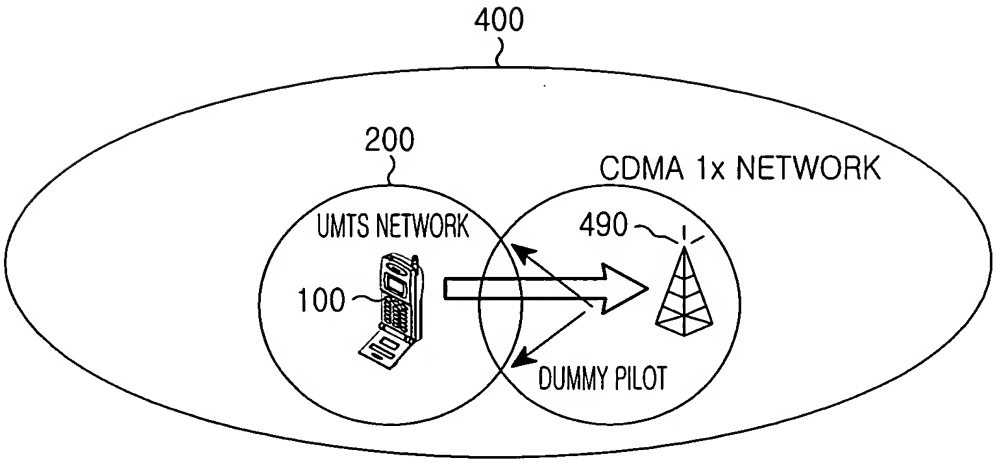
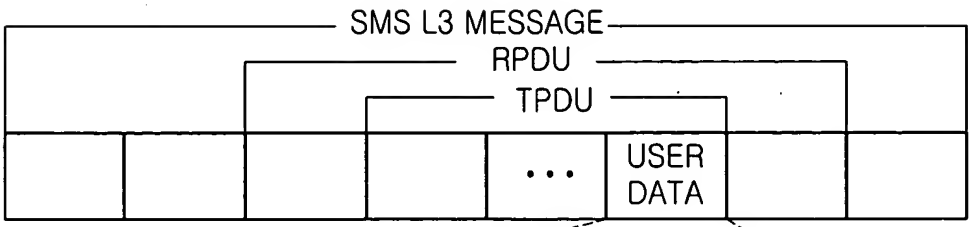


FIG.3



CDMA 1x SIGNAL MEASUREMENT INFO

7	6	5	4	3	2	1	0	bit
MESSAGE TYPE								octet 1
NUMBER OF PILOTS								octet 2
PILOT OFFSET INFO								octet 3
								octet 4
PILOT STRENGTH INFO								octet 5
								octet 6
			⋮	⋮				⋮
								octet n

FIG.4

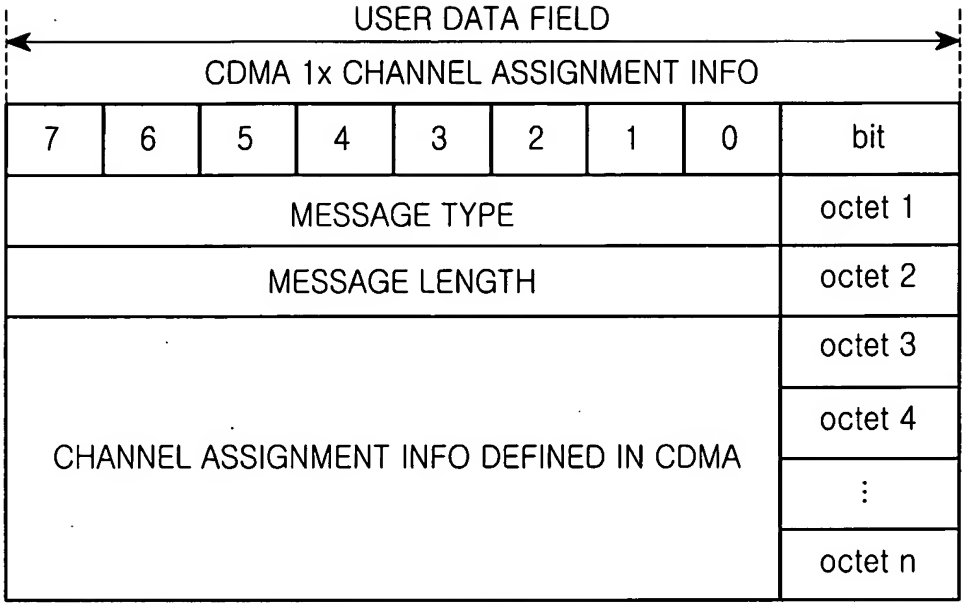

USER DATA FIELD
CDMA 1x CHANNEL ASSIGNMENT INFO
7
6
5
4
3
2
1
0
bit
MESSAGE TYPE
octet 1
MESSAGE LENGTH
octet 2
CHANNEL ASSIGNMENT INFO DEFINED IN CDMA
octet 3
octet 4
⋮
octet n

FIG.5

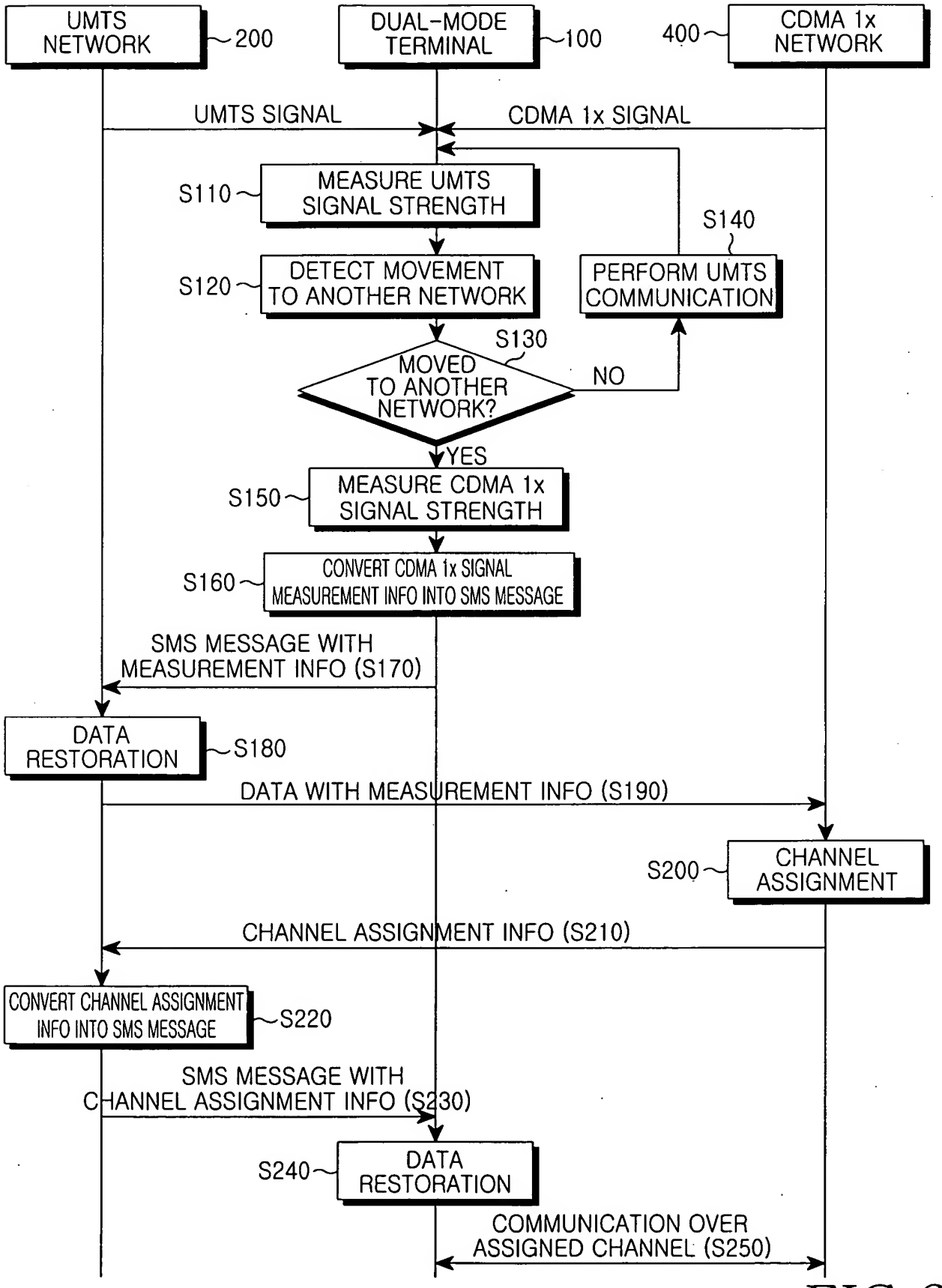

UMTS NETWORK
200
DUAL-MODE TERMINAL
100
400
CDMA 1x NETWORK
UMTS SIGNAL
CDMA 1x SIGNAL
S110
MEASURE UMTS SIGNAL STRENGTH
S120
DETECT MOVEMENT TO ANOTHER NETWORK
S130
MOVED TO ANOTHER NETWORK?
NO
YES
S140
PERFORM UMTS COMMUNICATION
S150
MEASURE CDMA 1x SIGNAL STRENGTH
S160
CONVERT CDMA 1x SIGNAL MEASUREMENT INFO INTO SMS MESSAGE
SMS MESSAGE WITH MEASUREMENT INFO (S170)
DATA RESTORATION
S180
DATA WITH MEASUREMENT INFO (S190)
S200
CHANNEL ASSIGNMENT
CHANNEL ASSIGNMENT INFO (S210)
CONVERT CHANNEL ASSIGNMENT INFO INTO SMS MESSAGE
S220
SMS MESSAGE WITH CHANNEL ASSIGNMENT INFO (S230)
S240
DATA RESTORATION
COMMUNICATION OVER ASSIGNED CHANNEL (S250)

FIG.6

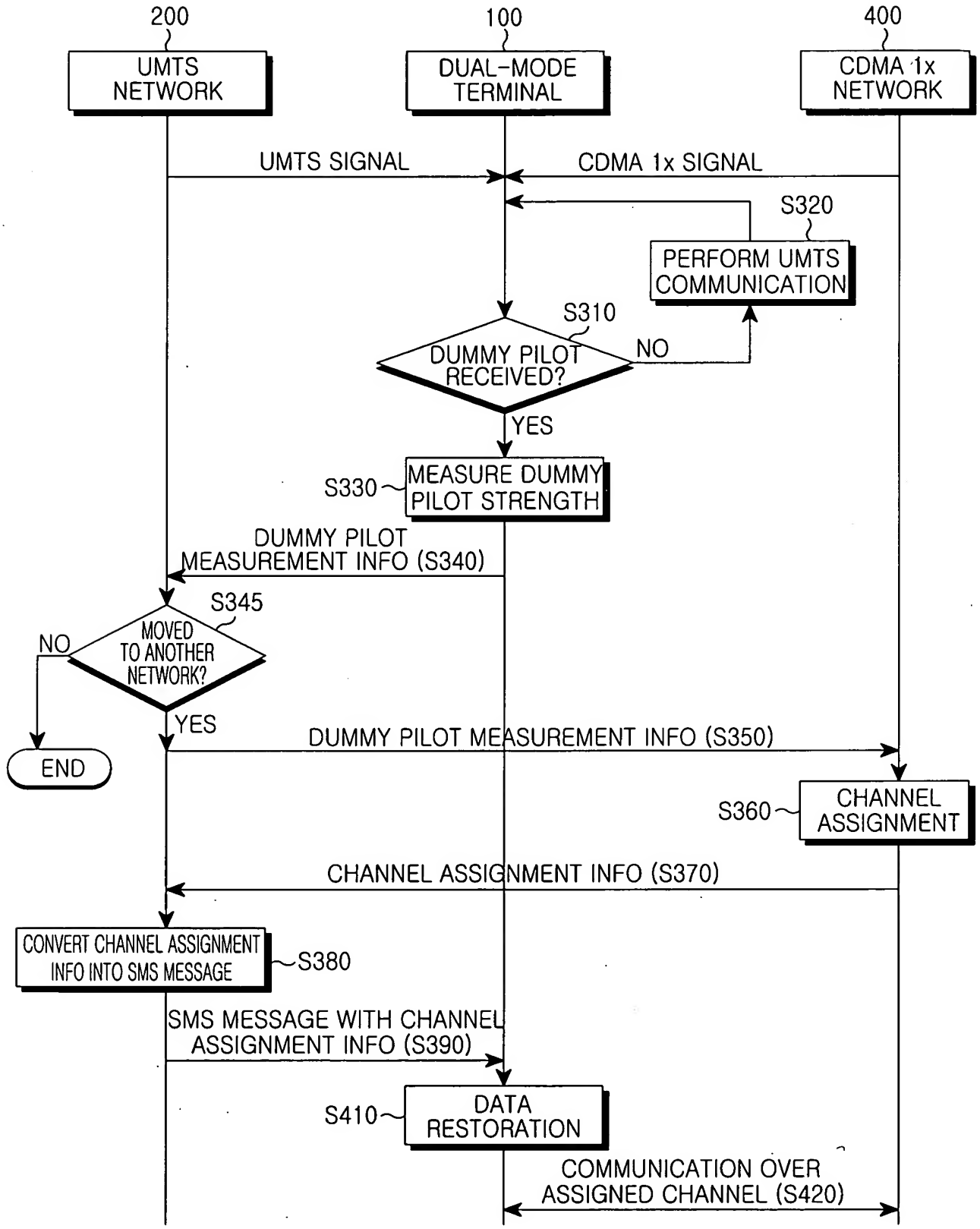

200
UMTS NETWORK
100
DUAL-MODE TERMINAL
400
CDMA 1x NETWORK
UMTS SIGNAL
CDMA 1x SIGNAL
S320
PERFORM UMTS COMMUNICATION
S310
DUMMY PILOT RECEIVED?
NO
YES
S330
MEASURE DUMMY PILOT STRENGTH
DUMMY PILOT MEASUREMENT INFO (S340)
S345
MOVED TO ANOTHER NETWORK?
NO
YES
END
DUMMY PILOT MEASUREMENT INFO (S350)
S360
CHANNEL ASSIGNMENT
CHANNEL ASSIGNMENT INFO (S370)
CONVERT CHANNEL ASSIGNMENT INFO INTO SMS MESSAGE
S380
SMS MESSAGE WITH CHANNEL ASSIGNMENT INFO (S390)
S410
DATA RESTORATION
COMMUNICATION OVER ASSIGNED CHANNEL (S420)

FIG.7